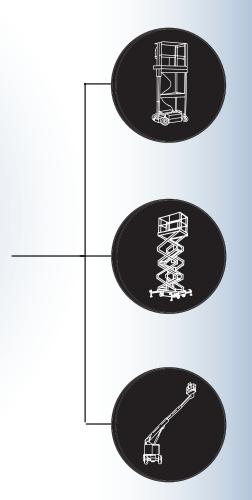


# Division of Occupational Safety and Health

# Elevating Work Platforns



# Chapter 296-869 WAC

**January 2007 Edition** 



F414-146-000 01/2007 printing

### **Quick Reference**

TITLE	PAGE
Scope WAC 296-869-100	100-1
Aerial lifts WAC 296-869-200	200-1
Design, construction and equipment WAC 296-869-300	300-1
Inspection, repair, maintenance and servicing WAC 296-869-400	400-1
Operator training WAC 296-869-500	5001
Operation WAC 296-869-600	600-1
Definitions WAC 296-869-700	700-1
Resources	R-1
Index	IN-1
Statutory Authority	SA-1

# **Notes**

TITLE	PAGE
Scope WAC 296-869-100	100-1
Aerial lifts WAC 296-869-200  Design and construction WAC 296-869-20005	
Modifications WAC 296-869-20010	200-3
Owned, rented, or leased aerial lifts WAC 296-869-20015	200-3
Operator requirements WAC 296-869-20020	200-4
Operator training WAC 296-869-20025	200-4
Operator prestart inspection WAC 296-869-20030	200-6
Workplace survey WAC 296-869-20035	200-7
Before and during use WAC 296-869-20040	200-7
Working from the platform WAC 296-869-20045	200-8
Moving the aerial lift WAC 296-869-20050	200-9
Aerial ladders WAC 296-869-20055	

TITLE	PAGE
Design, construction and equipment WAC 296-869-300	300-1
Manually propelled elevating work platforms WAC 296-869-30005	300-2
Self-propelled elevating work platforms WAC 296-869-30010	300-3
Boom-supported elevating work platforms WAC 296-869-30015	300-4
Modifications WAC 296-869-30015	300-5
Inspection, repair, maintenance and servicing WAC 296-869-400	400-1
Condition WAC 296-869-40005	400-2
Inspections WAC 296-869-40010	400-2
Repairs and adjustments WAC 296-869-40015	400-4
Manufacturer's safety bulletins WAC 296-869-40020	400-4
Inspection and repair records WAC 296-869-40025	400-5
Fueling and battery charging WAC 296-869-40030	400-6

TITLE	PAGE
Operator training WAC 296-869-500	500-1
Operator authorization and training WAC 296-869-50005	500-2
Specific model training WAC 296-869-50010	500-3
Operator training records WAC 296-869-50015	500-4
Operation WAC 296-869-600	
Intended use WAC 296-869-60005	600-2
Workplace survey WAC 296-869-60010	600-3
Hazardous locations WAC 296-869-60015	600-4
Set up WAC 296-869-60020	600-9
Travel speed WAC 296-869-60025	600-9
Driving WAC 296-869-60030	600-10
Elevating and lowering the platform WAC 296-869-60035	600-11
Working from the platform WAC 296-869-60040	600-13
Malfunctions or unsafe conditions WAC 296-869-60045	

TITLE	PAGE
Definitions	700-1
Resources	R-1
Index	IN-1
Statutory Authority	SA-1

# **Elevating Work Platforms**

### Scope

This chapter applies to the following types of elevating work platforms:

- Aerial lifts
- Manually propelled elevating work platforms that have a platform that can't be positioned completely beyond the base
- Self-propelled elevating work platforms that have a platform that can't be positioned completely beyond the base
- Boom-supported elevating work platforms that have a boom-supported platform that can be positioned completely beyond the base



### **Exemption:**

- > This chapter doesn't apply to elevating work platforms used:
  - By the fire services for fire combat that are covered by Safety Standards for Fire Fighters, Chapter 296-305 WAC
  - For agriculture activities covered by Safety Standards for Agriculture, Chapter 296-307 WAC



### **Definitions:**

or

**Aerial lift:** An aerial device mounted on a vehicle such as a truck, trailer, or all-terrain vehicle.

**Aerial device:** A vehicle-mounted device, telescoping or articulating, or both, which is used to position personnel.

**Elevating work platform:** A device used to position personnel, along with their necessary tools and materials, at work locations. It includes a platform and an elevating assembly and may be either:

Vehicle mounted

or

 Have an integral chassis providing mobility and a means of support **Platform:** The portion of an elevating work platform intended to be occupied by personnel. It may also be called a basket, bucket, stand, or similar term.



### **Helpful Tools:**

You can find examples of elevated work platforms in the Resources section of this chapter.



# **Notes**



### **Section Contents**

### **IMPORTANT:**

This section applies to the following types of vehicle-mounted aerial devices:

- Extensible-boom work platforms
- Articulating-boom work platforms
- Vertical towers
- Aerial ladders
- A combination of any of the above types of elevating work platforms

### YOUR RESPONSIBILITY:

### To meet these requirements when using aerial lifts

Design and Construction WAC 296-869-20005	200-2
Modifications WAC 296-869-20010	200-3
Owned, rented, or leased aerial lifts WAC 296-869-20015	200-3
Operator requirements WAC 296-869-20020	200-4
Operator training WAC 296-869-20025	200-4
Operator prestart inspection WAC 296-869-20030	200-6
Workplace survey WAC 296-869-20035	200-7
Before and during use WAC 296-869-20040	200-7
Working from the platform 296-869-20045	200-8
Moving the aerial lift WAC 296-869-20050	200-9
Aerial ladders WAC 296-869-20055	200-9





### Rule

WAC 296-869-20005

### **Design and construction**

### You must

- Make sure aerial lifts manufactured on or after July 1, 2006, meet the design and construction requirements of ANSI A92.2-2001, American National Standard for Vehicle-Mounted Elevating and Rotating Aerial Devices.
- Make sure aerial lifts manufactured before July 1, 2006, meet the design and construction requirements of ANSI A92.2-1969, American National Standard for Vehicle-Mounted Elevating and Rotating Work Platforms.



### Definition:

Aerial lift: An aerial device mounted on a vehicle such as a truck, trailer, or all-terrain vehicle.

Aerial device: A vehicle-mounted device, telescoping or articulating, or both, which is used to position personnel.





### Rule

WAC 296-869-20010

### **Modifications**

### You must

- Have written approval from the manufacturer before making any modification or addition that affects the safe operation, stability, intended use, or the mechanical, hydraulic, or electrical integrity of the aerial lift. Make sure the modified aerial lift is:
  - At least as safe as it was before being modified

### and

 Any change to the insulated portion of the aerial lift doesn't reduce the insulating value



### Note:

If the original manufacturer is no longer in business, an equivalent entity such as a nationally recognized testing laboratory may approve modification.

WAC 296-869-20015

### Owned, rented, or leased aerial lifts

### **IMPORTANT:**

This section applies if you own, rent, or lease an aerial lift.

### You must

- Meet the requirements of the Responsibilities of Owners, section 8, of ANSI A92.2-2001, American National Standard for Vehicle-Mounted Elevating and Rotating Aerial Devices, if you own an aerial lift.
- Meet the requirements of the Responsibilities of Renters, Lessors or Lessees, section 11, of ANSI A92.2-2001, American National Standard for Vehicle-Mounted Elevating and Rotating Aerial Devices, if you rent or lease an aerial lift.



### **Aerial Lifts**

WAC 296-869-200

### Rule

WAC 296-869-20020

### **Operator requirements**

### You must

Permit only trained and authorized personnel to operate aerial lifts.

### WAC 296-869-20025

### **Operator training**

### You must

- Make sure personnel are trained before they are permitted to operate an aerial lift.
- Cover at least the following items:
  - General instruction on the inspection, application, and operation of aerial lifts
    - Include recognizing and avoiding hazards associated with their operation
  - Purpose and use of manuals
    - Include proper storage of the manuals on the vehicle when not in use
  - Prestart inspection
  - Responsibilities associated with problems or malfunctions affecting the operation of the aerial lift
  - Factors affecting stability
  - Purpose of placards and decals
  - Workplace survey
  - Safety rules and regulations pertinent to the industry
  - Authorization to operate an aerial lift
  - Operator warnings and instructions
  - Proper use of personal fall protection equipment

### -Continued-



### Rule

# WAC 296-869-20025 Operator training (continued)

### You must

- Have operator trainees actually operate the aerial lift, under the direction of a qualified person, for enough time to demonstrate proficiency.
- Retrain an operator if evaluation and observation of the operator indicates retraining is necessary.
- Instruct operators in all of the following before they are directed to operate an aerial lift with which they aren't familiar:
  - Location of the manuals
  - Purpose and function of all controls
  - Safety devices and operating characteristics specific to the aerial lift



## **Aerial Lifts**

WAC 296-869-200

### Rule

WAC 296-869-20030

### **Operator prestart inspection**

### You must

- Make sure the operator does a prestart inspection of the aerial device as shown in Table 1, Operator Prestart Inspection.
- Have a qualified person examine or test any items found during the inspection that are thought to be unsafe to determine if they constitute a safety hazard.
- Replace or repair all unsafe items before use.

# Table 1 Operator Prestart Inspection

Component or system	Test or inspect for the following
Operating controls and associated mechanisms	Conditions interfering with proper operation
Visual and audible safety devices	Malfunctions
Hydraulic or pneumatic systems	Visible deterioration or excessive leaks
Fiberglass and other insulating components	Visible damage or contamination
Operational and instructional markings	That they are present and legible
Electrical systems of or related to the aerial device	Malfunction and for signs of excessive deterioration, dirt, and moisture accumulation
Locking devices, bolts, pins, and other fasteners	That they are in-place and not loose or deformed



### Rule

WAC 296-869-20035

### **Workplace survey**

### You must

- Have the operator survey the area, before using an aerial lift, for hazards such as:
  - Untamped earth fills
  - Ditches
  - Drop-offs and floor obstructions
  - Debris
  - Overhead obstructions and electrical conductors
  - Weather conditions
  - Unauthorized persons in the area

WAC 296-869-20040

### Before and during use

### You must

- Set the brakes and make sure outriggers, when used, are positioned on pads or a solid surface.
- Install wheel chocks when using the aerial lift on an incline if they can be installed safely.



# AE

### **Aerial Lifts**

WAC 296-869-200

### Rule

WAC 296-869-20045

### Working from the platform

### You must

- Make sure boom and platform load limits specified by the manufacturer aren't exceeded.
- Make sure persons stand firmly on the floor of the platform and don't:
  - Sit or climb on the edge of the platform

or

- Use guardrails, planks, ladders, or any other device to gain additional height or reach
- Prohibit wearing climbers when working from the platform.
- Make sure all persons on the platform wear a full body harness with a lanyard attached to either:
  - The manufacturer's recommended attachment point

or

- The boom or platform if the manufacturer doesn't specify an attachment point
- Never attach a lanyard to an adjacent pole, structure, or equipment.



### Rule

WAC 296-869-20050

### Moving the aerial lift

### You must

 Make sure the boom is properly cradled and the outriggers are in the stowed position before moving the aerial lift.



### **Exemption:**

The aerial lift may be moved with the boom elevated and personnel on the platform only if the equipment was specifically designed for this type of operation.

WAC 296-869-20055

### **Aerial ladders**

### You must

- Secure aerial ladders in the lower traveling position, using the locking device or other means provided by the manufacturer, before moving it for highway travel.
- Make sure all persons working from an aerial ladder wear a full body harness and lanyard attached to either:
  - The manufacturer's recommended attachment point

or

- The ladder rail if the manufacturer doesn't specify an attachment point



# **Notes**

# Design, Construction and Equipment

WAC 296-869-300

### **Section Contents**

### **IMPORTANT:**

This section applies to manually propelled, self-propelled, and boom-supported elevating work platforms.

### YOUR RESPONSIBILITY:

To make sure elevating work platforms meet these design, construction, and equipment requirements

Manually propelled elevating work platforms WAC 296-869-30005	300-2
Self-propelled elevating work platforms WAC 296-869-30010	300-3
Boom-supported elevating work platforms WAC 296-869-30015	300-4
Modifications WAC 296-869-30020	300-5

### Rule

WAC 296-869-30005

### Manually propelled elevating work platforms

### IMPORTANT:

This section applies to manually propelled, integral chassis, elevating work platforms with a platform that can't be positioned completely beyond the base.

### You must

- Make sure manually propelled elevating work platforms meet the design and construction requirements of American National Standards Institute (ANSI) A92.3-1990, American National Standard for Manually Propelled Elevating Aerial Platforms.
- Make sure the manufacturer provides instructions and markings that meet the requirements of ANSI A92.3-1990, American National Standard for Manually Propelled Elevating Aerial Platforms, on each elevating work platform.
- Make sure manuals that meet the requirements of ANSI A92.3-1990, American National Standard for Manually Propelled Elevating Aerial Platforms, are:

Provided for each elevating work platform

### and

Kept in the weather-resistant storage compartment provided by the manufacturer



### Note:

Required manuals include the manufacturer's operating and maintenance manuals and a manual that defines the responsibilities of dealers, owners, lessors, lessees, users, and operators.

# Design, Construction and Equipment

WAC 296-869-300

### Rule

WAC 296-869-30010

### Self-propelled elevating work platforms

### **IMPORTANT:**

This section applies to self-propelled, integral chassis, elevating work platforms with a platform that can't be positioned completely beyond the base.

### You must

- Make sure self-propelled elevating work platforms manufactured on or after July 1, 2006, meet the design and construction requirements of ANSI A92.6-1999, American National Standard for Self-Propelled Elevating Work Platforms.
- Make sure self-propelled elevating work platforms manufactured before July 1, 2006 meet the design and construction requirements of ANSI A92.6-1990, American National Standard for Self-Propelled Elevating Work Platforms.
- Make sure the manufacturer provides instructions and markings that meet the requirements of ANSI A92.6-1990 or A92.6-1999, American National Standard for Self-Propelled Elevating Work Platforms, as appropriate, on each elevating work platform.
- Make sure manuals that meet the requirements of ANSI A92.6-1990 or A92.6-1999, American National Standard for Self-Propelled Elevating Work Platforms, as appropriate, are:
  - Provided for each elevating work platform

### and

 Kept in the weather-resistant storage compartment provided by the manufacturer



### Note:

Required manuals include the manufacturer's operating and maintenance manuals and a manual that defines the responsibilities of dealers, owners, lessors, lessees, users, and operators.



### Rule

WAC 296-869-30015

### **Boom-supported elevating work platforms**

### IMPORTANT:

This section applies to self-propelled, integral chassis, elevating work platforms with a boom-supported platform that can be positioned completely beyond the base.

### You must

- Make sure boom-supported elevating work platforms meet the design and construction requirements of American National Standards Institute (ANSI) A92.5-1992, American National Standard for Boom-Supported Elevating Work Platforms.
- Make sure the manufacturer provides instructions and markings that meet the requirements of ANSI A92.5-1992, American National Standard for Boom-Supported Elevating Work Platforms, on each elevating work platform.
- Make sure manuals that meet the requirements of ANSI A92.5-1992, American National Standard for Boom-Supported Elevating Work Platforms, are:
  - Provided for each elevating work platform

### and

Kept in the weather-resistant storage location provided by the manufacturer



### Note:

Required manuals include the manufacturer's operating and maintenance manuals and a manual that defines the responsibilities of dealers, owners, lessors, lessees, users, and operators.

# Design, Construction and Equipment

WAC 296-869-300

### Rule

WAC 296-869-30020

### **Modifications**

### You must

- Prohibit altering or disabling interlocks or other safety devices.
- Have written permission from the manufacturer before making any modification to an elevating work platform.



### Note:

If the original manufacturer is no longer in business, an equivalent entity such as a nationally recognized testing laboratory may approve modification.

# **Notes**

# Inspection, Repair, Maintenance and Servicing WAC 296-869-400

### **Section Contents**

### **IMPORTANT:**

This section applies to manually propelled, self-propelled, and boom-supported elevating work platforms.

### YOUR RESPONSIBILITY:

### To inspect, repair, maintain, and service elevating work platforms to keep them in safe operating condition

Condition WAC 296-869-40005	400-2
Inspections WAC 296-869-40010	400-2
Repairs and adjustments WAC 296-869-40015	400-4
Manufacturer's safety bulletins WAC 296-869-40020	400-4
Inspection and repair records WAC 296-869-40025	400-5
Fueling and battery charging WAC 296-869-40030	400-6

## Inspection, Repair, **Maintenance and Servicing**

### Rule

WAC 296-869-40005

### Condition

### You must

- Inspect and maintain elevating work platforms to keep them in proper operating condition.
- Immediately remove from service any elevating work platform that isn't in proper operating condition.

WAC 296-869-40010

### **Inspections**

### You must

- Do a prestart inspection of the elevating work platform according to Table 2, Elevating Work Platform Inspections.
- Make sure frequent and annual inspections are done:
  - By a person qualified as a mechanic on the specific make and model of elevating work platform

### and

According to Table 2, Elevating Work Platform Inspections

### -Continued-

# Inspection, Repair, Maintenance and Servicing

WAC 296-869-400

### Rule

WAC 296-869-40010

### Inspections (continued)

Table 2
Elevating Work Platform Inspections

Towns of	When required	•
Type of inspection	When required	Items to inspect
Prestart	At the beginning of each shift	Do a visual inspection and functional test including at least the following:     Operating and emergency controls     Safety devices     Personal protective devices, including fall protection     Air, hydraulic and fuel system leaks     Cables and wiring harness     Loose or missing parts     Tires and wheels     Placards, warnings, control markings, and required manuals     Outriggers, stabilizers, and other structures     Guardrail system     Items specified by the manufacturer
Frequent	Elevating work platforms that have been in service 3 months or 150 hours, whichever comes first and     Before putting elevating work platforms back in service that have been out of service for more than 3 months     Note:     Newly purchased used equipment should be given the equivalent of a frequent inspection before being put into service	<ul> <li>All functions and their controls for speeds, smoothness, and limits of motion</li> <li>Emergency lowering means (manually propelled only)</li> <li>Lower controls including the provisions for overriding of upper controls (self-propelled and boom-supported)</li> <li>All chain and cable mechanisms for adjustment and worn or damaged parts</li> <li>All emergency and safety devices</li> <li>Lubrication of all moving parts, inspection of filter element(s), hydraulic oil, engine oil, and coolant as specified by the manufacturer</li> <li>Visual inspection of structural components and other critical components such as fasteners, pins, shafts, turntable attachment bolts (boomsupported only), and locking devices</li> <li>Placards, warnings, and control markings</li> <li>Additional items specified by the manufacturer</li> </ul>
Annual	No later than 13 months from the date of the last annual inspection	All items specified by the manufacturer for an annual inspection

# Inspection, Repair, Maintenance and Servicing

WAC 296-869-400

### Rule

WAC 296-869-40015

### Repairs and adjustments

### You must

- Make sure repairs to elevating work platforms are:
  - Made by a qualified person

### and

- Done according to the manufacturer's recommendations
- Make sure the elevating work platform, before beginning adjustments or repairs, meets all of the following requirements that apply:
  - All controls in the "off" position
  - All operating features secured from inadvertent motion by brakes, blocks, or other means
  - Powerplant stopped
  - Means of starting is rendered inoperative
  - Platform either:
    - Lowered to the full down position, if possible

### or

- Blocked or cribbed to prevent dropping
- Hydraulic pressure relieved from all hydraulic circuits before loosening or removing hydraulic components
- Safety props or latches installed, where applicable
- Other precautions as specified by the manufacturer
- Make sure replacement parts or components are identical or equivalent to the original parts or components.

### WAC 296-869-40020

### Manufacturer's safety bulletins

### You must

 Meet the requirements of safety-related bulletins as received from the manufacturer, dealer, or owner.

# Inspection, Repair, Maintenance and Servicing

WAC 296-869-400

### Rule

WAC 296-869-40025

### Inspection and repair records

### You must

- Keep written records documenting:
  - Frequent and annual inspections you have done including:
    - Date of inspection
    - Deficiencies found
    - Corrective action recommended
  - Names of the people who did the inspection

### and

- All repairs done on the elevating work platform, including:
  - Date of repair
  - Description of the work done
  - Names of the people who did the repair
- Retain the records of inspections and repairs for at least:
  - 3 years for manually propelled and boom-supported elevating work platforms
     and
  - 4 years for self-propelled elevating work platforms



It is the responsibility of the owner of the elevating work platform to make sure frequent and annual inspections are done and documented. If you perform either type of inspection, or make repairs to the elevating work platform, send the appropriate records to the owner of the elevating work platform.

# Inspection, Repair, Maintenance and Servicing

### Rule

WAC 296-869-40030

### Fueling and battery charging

### You must

- Shut-down the engine while filling fuel tanks.
- Fill fuel tanks and charge batteries in areas that are:
  - Open and well-ventilated

### and

- Free of flame, sparks, or other hazards that may cause fire or explosion



### **Section Contents**

### **IMPORTANT:**

This section applies to manually propelled, self-propelled, and boom-supported elevating work platforms.

### YOUR RESPONSIBILITY:

### To properly train elevating work platform operators

Operator authorization and training  NAC 296-869-50005	500-2
Specific model training  NAC 296-869-50010	500-3
Operator training records  NAC 296-869-50015	500-4



# Operator Training WAC 296-869-500

### Rule

WAC 296-869-50005

### Operator authorization and training

### You must

- Permit only trained and authorized personnel to operate elevating work platforms.
- Train operators in all of the following:
  - The manufacturer's operating and maintenance manuals
  - Your work instructions
  - The requirements of this chapter



### Rule

WAC 296-869-50010

### Specific model training

### You must

- Make sure operators:
  - Know the required manuals supplied by the manufacturer are stored in a weather resistant compartment and where the compartment is located

### and

- Refer to the manuals when necessary
- Make sure operators do all of the following before operating an elevating work platform:
  - Read and understand the manufacturer's operating instructions and your safety rules, or have them explained by a qualified person
  - Understand, by reading or by having a qualified person explain, all decals, warnings, and instructions displayed on the elevating work platform
  - Are instructed by a qualified person in the intended purpose and function of each control
- Have operator trainees demonstrate their knowledge and proficiency during actual operation of an elevating work platform under the following conditions:
  - Under the direction of a qualified person
  - In an area free of obstructions
  - Using an elevating work platform that is:
    - The same model that they will be operating

### or

· One that has similar controls and operating characteristics



# Operator Training WAC 296-869-500

### Rule

WAC 296-869-50015

### **Operator training records**

### You must

- Retain records of the operators trained on each model of elevating work platform for at least:
  - 3 years for manually propelled and boom-supported elevating work platforms and
  - 4 years for self-propelled elevating work platforms





### **Section Contents**

### **IMPORTANT:**

This section applies to manually propelled, self-propelled, and boom-supported elevating work platforms.

### YOUR RESPONSIBILITY:

# To meet these requirements when operating elevating work platforms

Intended use WAC 296-869-60005	600-2
Workplace survey WAC 296-869-60010	600-3
Hazardous locations WAC 296-869-60015	600-4
Set up WAC 296-869-60020	600-9
Travel speed WAC 296-869-60025	600-9
Driving WAC 296-869-60030	600-10
Elevating and lowering the platform WAC 296-869-60035	600-11
Working from the platform WAC 296-869-60040	600-13
Malfunctions or unsafe conditions WAC 296-869-60045	600-13



# Rule

WAC 296-869-60005

#### Intended use

#### You must

Make sure elevating work platforms are used only for their intended purpose as specified by the manufacturer.



#### Note:

- Misuse of an elevating work platform includes, but isn't limited to:
- > Using the elevating work platform as a crane
- > Using the platform to jack the wheels off the ground, unless the machine was designed for that purpose by the manufacturer
- > Operating the elevating work platform from a truck, trailer, railway car, floating vessel, scaffold, or similar equipment unless the application is approved in writing by the manufacturer





WAC 296-869-60010

# Workplace survey

- Have the operator survey the area before and during use of an elevating work platform for hazards such as:
  - Drop-offs or holes
  - Slopes
  - Bumps and floor obstructions
  - Debris
  - Overhead obstructions and high voltage conductors
  - Hazardous locations
  - Inadequate surface and support to withstand the load imposed on them by the elevating work platform in all operating configurations
  - Wind and weather conditions
  - Unauthorized persons in the area
  - Other possible unsafe conditions



## Rule

WAC 296-869-60015

#### **Hazardous locations**

- Determine the hazard classification of any area where the elevating work platform will operate using National Fire Protection Association (NFPA) 505-2002, Fire Safety Standard for Powered Industrial Trucks Including Type Designations, Areas of Use, Conversions, Maintenance, and Operations.
- Make sure only approved elevating work platforms are used in Class I, II, or III locations.
- Make sure elevating work platforms are used in hazardous (classified) locations as follows:
  - Elevating work platforms authorized to be used in Class 1 locations are shown in Table 3, Approved Elevating Work Platform Use in Class 1 Locations
  - Elevating work platforms authorized to be used in Class 2 locations are shown in Table 4, Approved Elevating Work Platform Use in Class 2 Locations
  - Elevating work platforms authorized to be used in Class 3 locations are shown in Table 5, Approved Elevating Work Platform Use in Class 3 Locations
- Elevating work platforms authorized to be used in unclassified locations are:
  - Approved elevating work platforms designated as Type D, E, G, or LP and
  - Elevating work platforms that meet the requirements of Type D, E, G, or LP elevating work platforms.
- Have operators report any hazardous atmosphere or location that becomes apparent while operating the elevating work platform.





#### WAC 296-869-60015

## **Hazardous locations (continued)**



#### **Definitions:**

An *unclassified location* is an area that's not designated as a Class 1, 2, or 3 location.

The type designation is a code to identify types of elevating work platforms. It is used to determine if an elevating work platform can be used in a specific classified or unclassified location.

- D refers to elevating work platforms that are diesel engine powered that have minimum safeguards against inherent fire hazards.
- DS refers to diesel powered elevating work platforms that, in addition to meeting all the
  requirements for type D elevating work platforms, are provided with additional safeguards to
  the exhaust, fuel and electrical systems.
- DY refers to diesel powered elevating work platforms that have all the safeguards of the DS elevating work platforms and, in addition, any electrical equipment is completely enclosed.
   They are equipped with temperature limitation features.
- E refers to electrically powered elevating work platforms that have minimum acceptable safeguards against inherent fire hazards.
- ES refers to electrically powered elevating work platforms that, in addition to all of the
  requirements for the E elevating work platforms, have additional safeguards to the electrical
  system to prevent emission of hazardous sparks and to limit surface temperatures.
- EE refers to electrically powered elevating work platforms that, in addition to all of the
   -requirements for the E and ES type elevating work platforms, have their electric motors and
   all other electrical equipment completely enclosed.
- EX refers to electrically powered elevating work platforms that differ from E, ES, or EE type
  elevating work platforms in that the electrical fittings and equipment are designed, constructed and assembled to be used in atmospheres containing flammable vapors or dusts.
- G refers to gasoline powered elevating work platforms that have minimum acceptable safeguards against inherent fire hazards.
- GS refers to gasoline powered elevating work platforms that are provided with additional exhaust, fuel, and electrical systems safeguards.
- LP refers to liquefied petroleum gas-powered elevating work platforms that, in addition to
  meeting all the requirements for type G elevating work platforms, have minimum acceptable
  safeguards against inherent fire hazards.
- LPS refers to liquefied petroleum gas-powered elevating work platforms that in addition to meeting the requirements for LP type elevating work platforms, have additional exhaust, fuel, and electrical systems safeguards.





# Rule

WAC 296-869-60015

# Hazardous locations (continued)

Table 3 **Approved Elevating Work Platform Use in Class 1 Locations** 

#### Class 1

Locations in which flammable gases or vapors are, or may be, present in the air in quantities sufficient to produce explosive or ignitable mixtures

Division 1				Division 2			
Conditions exist continuously, intermittently, or periodically under normal operating conditions.			Conditions may occur accidentally, for example, due to a puncture of a storage drum.				
Group A	Group B	Group C	Group D	Group A	Group B	Group C	Group D
Acetylene	Hydrogen	Ethyl ether	Acetone	Acetylene	Hydrogen	Ethyl ether	Acetone
			Alcohols				Alcohols
			Benzene				Benzene
			Gasoline				Gasoline
			Lacquer				Lacquer
			Solvent				Solvent
No type can be used	No type can be used	No type can be used	Use this elevating work platform type	No type can be used	No type can be used	No type can be used	Use this elevating work platform
			EX				DS
							DY
							ES
							EE
							EX
							GS
							LPS



# WAC 296-869-60015 **Hazardous locations (continued)**

Table 4 **Approved Elevating Work Platform Use in Class 2 Locations** 

		Class	s 2			
Locations which	ch are hazardous b	ecause of the prese	ence of combustible	e dust		
	Division 1		Division 2			
Explosive mixture may be present under normal operating conditions, or where failure of equipment may cause the condition to exist simultaneously with arcing or sparking of electrical equipment, or where dusts of an electrically conducting nature may be present.			Explosive mixture not normally present, but where deposits of dust may cause heat rise in electrical equipment, or where such deposits may be ignited by arcs or sparks from electrical equipment.			
Group E	Group F	Group G	Group E	Group F	Group G	
Metal dust	Carbon black	Grain dust	Metal dust	Carbon black	Grain dust	
	Coal dust	Flour dust		Coal dust	Flour dust	
	Coke dust	Starch dust		Coke dust	Starch dust	
		Organic dust			Organic dust	
No type can be used	Use this elevating work platform type	Use this elevating work platform type	No type can be used	No type can be used	Use this elevating work platform type	
	EX	EX			DS	
					DY	
					ES	
					EE	
					EX	
					GS	
					LPS	



# Operation WAC 296-869-600

# Rule

# WAC 296-869-60015 **Hazardous locations (continued)**

Table 5 **Approved Elevating Work Platform Use in Class 3 Locations** 

Class 3				
Locations where easily ignitable fibers or flyings are present but not likely to be in suspension in quantities sufficient to produce ignitable mixtures				
Division 1	Division 2			
Locations in which easily ignitable fibers or materials producing combustible flyings are handled, manufactured, or used.	Locations in which easily ignitable fibers are stored or handled (except in the process of manufacture).			
Use this elevating work platform type	Use this elevating work platform type			
DY	DS			
EE	DY			
EX	E			
	ES			
	EE			
	EX			
	GS			
	LPS			





#### WAC 296-869-60020

### Set up

#### You must

- Prohibit positioning the elevating work platform against another object in order to steady the platform.
- Do the following when other moving equipment or vehicles are present:
  - Take special precautions to meet the requirements of local ordinances or workplace safety standards

#### and

 Use warnings such as, but not limited to, flags, roped-off areas, flashing lights and barricades

#### WAC 296-869-60025

# **Travel speed**

- Make sure the operator limits travel speed according to conditions, including:
  - Condition of the ground or support surface
  - Congestion
  - Visibility
  - Slope
  - Location of personnel
  - Other factors that may create a hazard of collision or injury to personnel



# Rule

WAC 296-869-60030

# **Driving**

#### **IMPORTANT:**

This section doesn't apply to manually propelled elevating work platforms.

- Make sure the operator does all of the following before and while driving with the platform elevated:
  - Maintains a clear view of the path of travel
  - Keeps a safe distance from obstacles, debris, drop-offs, holes, depressions, ramps, and other hazards to safe travel
  - Keeps a safe distance from overhead obstacles
- Prohibit stunt driving and horseplay.





WAC 296-869-60035

## **Elevating and lowering the platform**

#### You must

- Have the operator make sure all of the following are done before each elevation of the platform:
  - The elevating work platform is on a surface that is within the limits specified by the manufacturer
  - Outriggers, stabilizers, extendable axes, or other stability enhancing means are used as required by the manufacturer
  - Guardrails are installed and access gates or openings are closed per the manufacturer's instructions
  - The load and its distribution on the platform and any platform extension doesn't exceed the manufacturer's rated capacity for the configuration being used
  - There is adequate clearance from overhead obstructions
  - The minimum safe approach distance (MSAD) to energized power lines and parts listed in Table 6, Minimum Safe Approach Distance, is maintained
  - All persons on the platform are wearing fall protection devices and other safety gear if required
- Prevent rope, electric cords, hoses and similar objects from becoming entangled with the platform.
- Have the operator make sure the area is clear of personnel and equipment before lowering the platform.
- Remove all personnel from a platform that has been caught, snagged, or otherwise prevented from normal motion before attempting to free it using ground controls.



# Rule

WAC 296-869-60035

# Elevating and lowering the platform (continued)



#### Note:

If possible, reverse the platform controls to free a platform that is caught, snagged, or otherwise prevented from normal motion by an adjacent structure or other obstacle.

Table 6 **Minimum Safe Approach Distance** 

Voltage	Minimum Safe Approach Distance
Less than 300 volts (insulated lines)	3 feet (0.9 m)
Less than 300 volts (uninsulated lines)	10 feet (3.1 m)
300 volts to 50 kv	10 feet (3.1 m)
More than 50 kv	10 feet (3.1 m) + 0.4 inches (1.0 cm) for each 1 kv over 50 kv





WAC 296-869-60040

## Working from the platform

#### You must

- Make sure persons working from the platform:
  - Keep a firm footing on the platform

#### and

- Do not use guardrails, planks, ladders, or any other device to gain additional height or reach
- Make sure all persons on the platform of boom-supported elevating work platforms
  wear a full body harness and lanyard fixed to manufacturer provided and approved
  attachment points.
- Make sure the rated capacities of the platform aren't exceeded when transferring loads to the platform at any height.



#### Note:

Guardrails are the primary means of fall protection for manually propelled elevating work platforms.

#### WAC 296-869-60045

#### Malfunctions or unsafe conditions

- Make sure operators, if they suspect a malfunction of the elevating work platform or encounter any hazard or potentially unsafe condition, do all of the following:
  - Cease operation
  - Report the problem or malfunction
  - Discontinue using the elevating work platform until problems or malfunctions that affect safe operation have been corrected



# **Notes**

# Elevating Work Platforms WAC 296-869-700

# **Definitions**

#### **Aerial device**

A vehicle-mounted device, telescoping or articulating, or both, which is used to position personnel.

#### Aerial ladder

A vehicle-mounted elevating work platform consisting of a single or multiple-section extensible ladder. It may or may not have a platform at the top.

#### **Aerial lift**

An aerial device mounted on a vehicle such as a truck, trailer, or all-terrain vehicle.

#### **Approved**

Listed or approved by a nationally recognized testing laboratory or a federal agency that issues approvals for equipment such as the Mine Safety and Health Administration (MSHA), the National Institute for Occupational Safety and Health (NIOSH), Department of Transportation or U.S. Coast Guard, which issue approvals for such equipment.

#### **Articulating-boom work platform**

A vehicle-mounted elevated work platform with 2 or more hinged boom sections.

#### Boom-supported elevating work platform

A self-propelled, integral chassis, elevating work platform with a boom-supported platform that can be positioned completely beyond the base.

#### Chassis

The part of a nonvehicle-mounted elevating work platform that provides mobility and support for the elevating assembly and platform.

#### **Elevating work platform**

A device used to position personnel, along with their necessary tools and materials, at work locations. It includes a platform and an elevating assembly. It may be vehicle mounted or have an integral chassis for mobility and as a means of support.



# Definitions

# **Elevating Work Platforms**

# **Definitions**

#### Extensible-boom work platform

A vehicle-mounted elevating work platform with a telescopic or extensible boom.

#### Manually propelled elevating work platform

A manually propelled, integral chassis, elevating work platform with a platform that can't be positioned completely beyond the base.

#### **Platform**

The portion of an elevating work platform intended to be occupied by personnel. It may also be called a basket, bucket, stand, or similar term.

#### Rated capacity

The designed carrying capacity of the elevating work platform as specified by the manufacturer.

#### Self-propelled elevating work platform

A self-propelled, integral chassis, elevating work platform with a platform that can't be positioned completely beyond the base.

#### Type designation

A code to identify types of elevating work platforms. It is used to determine if an elevating work platform can be used in a specific classified or unclassified location.

- D refers to elevating work platforms that are diesel engine powered that have minimum safeguards against inherent fire hazards.
- DS refers to diesel powered elevating work platforms that, in addition to meeting all the requirements for type D elevating work platforms, are provided with additional safeguards to the exhaust, fuel and electrical systems.
- DY refers to diesel powered elevating work platforms that have all the safeguards of the DS elevating work platforms and, in addition, any electrical equipment is completely enclosed. They are equipped with temperature limitation features.
- E refers to electrically powered elevating work platforms that have minimum acceptable safeguards against inherent fire hazards.

# Elevating Work Platforms WAC 296-869-700

# **Definitions**

#### Type designation (continued)

- ES refers to electrically powered elevating work platforms that, in addition to all of the requirements for the E elevating work platforms, have additional safeguards to the electrical system to prevent emission of hazardous sparks and to limit surface temperatures.
- EE refers to electrically powered elevating work platforms that, in addition to all of the requirements for the E and ES type elevating work platforms, have their electric motors and all other electrical equipment completely enclosed.
- EX refers to electrically powered elevating work platforms that differ from E, ES, or EE type elevating work platforms in that the electrical fittings and equipment are designed, constructed and assembled to be used in atmospheres containing flammable vapors or dusts.
- G refers to gasoline powered elevating work platforms that have minimum acceptable safeguards against inherent fire hazards.
- GS refers to gasoline powered elevating work platforms that are provided with additional exhaust, fuel, and electrical systems safeguards.
- LP refers to liquefied petroleum gas-powered elevating work platforms that, in addition to meeting all the requirements for type G elevating work platforms, have minimum acceptable safeguards against inherent fire hazards.
- LPS refers to liquefied petroleum gas-powered elevating work platforms that, in addition to meeting the requirements for LP type elevating work platforms, have additional exhaust, fuel, and electrical systems safeguards.

#### Vertical tower

A vehicle-mounted elevating work platform having a platform that can be raised along a vertical axis.



# **Notes**

# Elevating Work Platforms Chapter 296-869 WAC

# **Resources**

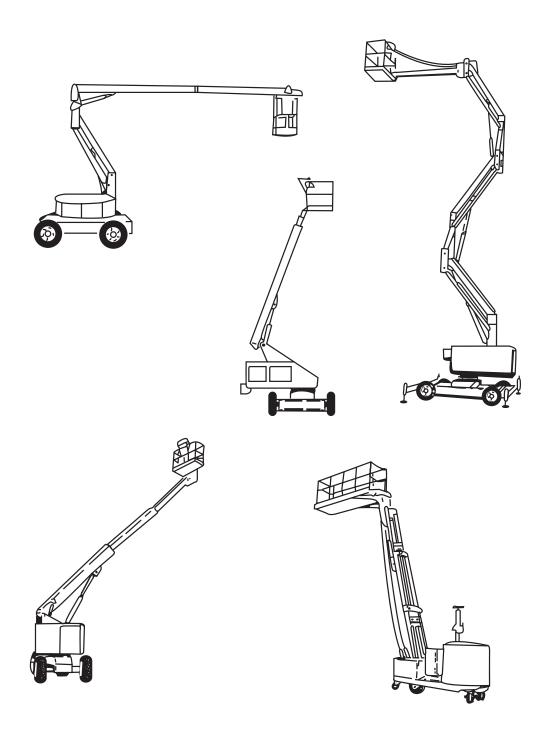
## **HELPFUL TOOLS**

Boom Supported Elevated Work Platforms	R-3
Manually Propelled Elevated Work Platforms	R-4
Self Propelled Flevated Work Platforms	R-5



# **Notes**

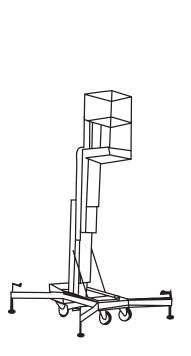
# Boom Supported Elevated Work Platforms Use with the Elevating Work Platforms rule, Chapter 296-869 WAC

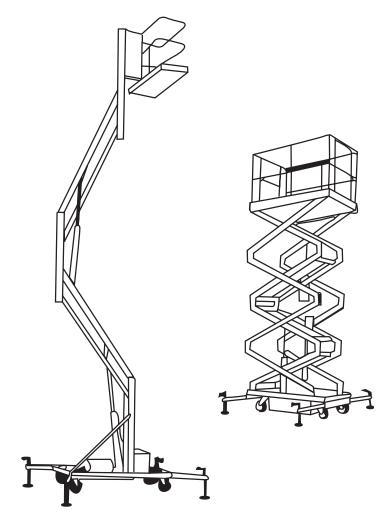




Manually Propelled Elevated Work Platforms

Use with the Elevating Work Platforms rule, Chapter 296-869 WAC



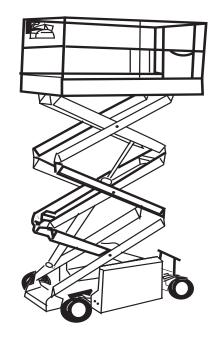


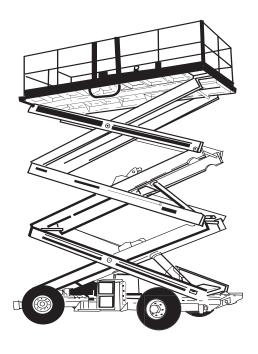


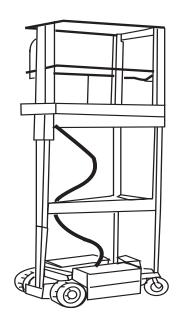
# esources

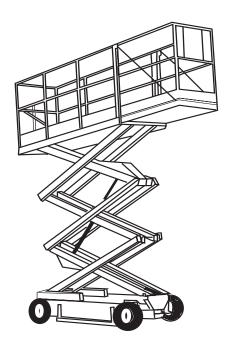
# **Self Propelled Elevated Work Platforms**

Use with the Elevating Work Platforms rule, Chapter 296-869 WAC











# **Notes**

# **Elevating Work Platforms**

# **Index**

#### Adjustments, repairs, 400-2 Aerial ladders, aerial lifts, 200-9 Aerial lifts aerial ladders, 200-9 ANSI standards, 200-2-3 design and construction, 200-2 fall protection, 200-8 leased, 200-3 modifications, 200-3 moving, 200-9 operators, 200-4; 200-4; 200-6 owned, rented, or leased, 200-3 platform, 200-8 prestart inspection, 200-6 setting brakes, 200-7 wheel chocks, installing, 200-7 workplace survey, 200-7 Annual inspection, 400-2 ANSI standards aerial lifts, 200-2-3 boom supported elevating work platforms, 300-4 self propelled elevating work platforms, 300-3 Approved elevating work platform use in class 1 locations, table 3, 600-6 Approved elevating work platform use in class 2

locations, table 4, 600-7

locations, table 5, 600-8 Authorization, operators, 500-2

#### В

Battery charging, 400-6 Boom supported elevating work platforms, 300-4

Approved elevating work platform use in class 3

Chapter application, scope, 100-1 Clearance from energized conductors, platforms, 600-11 Conditions, 400-2; 600-13

Driving, 600-10

Definitions, 700-1 Design and construction aerial lifts, 200-2 boom supported elevating work platforms, 300-4 manually propelled elevating work platforms, 300-2 self propelled elevating work platforms, 300-3 Designation, 600-4

Elevating and lowering the platform, 600-11 Elevating work platform inspections, table 2, 400-2

Fall protection aerial lifts, 200-8 platforms, 600-13 Frequent inspection, 400-2 Fueling, 400-6

#### Н

Hazardous locations, 600-4

#### 

Inspection and repair records, 400-5 Inspections, 400-2 Interlocks, 300-5; 400-5

Leased, aerial lifts, 200-3

Malfunctions, conditions, 600-13 Manually propelled elevating work platforms, design and construction, 300-2 Manufacturer's safety bulletins, 400-4 Minimum safe approach distance, table 6, 600-11 Modifications, aerial lifts, 200-3-5 Moving aerial lifts, 200-9 vehicles, 600-9

National fire protection association standards, 600-4 Inspections elevating work platforms, table 2, 400-2 repair records, 400-5



# **Elevating Work Platforms**

Chapter 296-869 WAC

## Index



Operators authorization, **500**-2 prestart inspection, table 1, **200**-6 requirements, aerial lifts, **200**-4 training, **200**-4; **500**-2-4 Owned, rented, or leased, aerial lifts, **200**-3

#### P

Platforms
aerial lifts, **200**-8
clearance from energized conductors, **600**-11
fall protection, **600**-13
rated capacity, **600**-13
stability, **600**-11
Prestart inspection, **200**-6; **400**-2

#### Q

Qualified person, repairs, 400-2

#### R

Rated capacity, platforms, **600**-13 Records, inspections, repairs, **400**-5 Rented, aerial lifts, **200**-3 Repairs, **400**-5 Replacement parts, **400**-4



Safety bulletins, **400**-4
Safety devices and interlocks, **300**-5
Scope, chapter application, **100**-1
Self propelled elevating work platforms, design and construction, **300**-3
Servicing, **400**-6
Set-up, **200**-7; **600**-9
Setting brakes, aerial lifts, **200**-7
Stability, platforms, **600**-11

#### Т

Table 1, operator prestart inspection, **200**-6
Table 2, elevating work platform inspections, **400**-2
Table 3, approved elevating work platform use in class 1 locations, **600**-6
Table 4, approved elevating work platform use in class 2 locations, **600**-7
Table 5, approved elevating work platform use in class 3 locations, **600**-8
Table 6, minimum safe approach distance, **600**-12
Training, **500**-2-4
Travel speed, **600**-9



Unsafe conditions, **600**-13 Use, **600**-2



Warnings, set-up, **600**-9 Wheel chocks, installing aerial lifts, **200**-7 Working from the platform, **600**-13 Workplace survey hazards, **600**-10 aerial lifts, **200**-7

